INVESTIGATOR'S ANNUAL REPORT

National Park Service

All or some of the information provided may be available to the public

Reporting Year: 1998	**Park:** Glacier Bay NP & PRES
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Permit#:
GLBA1998Hooge2

Park-assigned Study Id. #:
unknown

Project Title:
Fjord oceanographic survey and monitoring of Glacier Bay, Alaska.

Permit Start Date: Jan 01, 1998	**Permit Expiration Date** Jan 01, 1999
Study Start Date: Jan 01, 1994	**Study End Date** Jan 01, 2000

Study Status:
Completed

Activity Type:
Monitoring

Subject/Discipline:
Coastal / Marine Systems

Objectives:

This project involves the monitoring of within and between year oceanographic patterns along the glacial chronosequence in Glacier Bay, Alaska. Glacier Bay exhibits large scale differences in oceanographic patterns due to fjord and estuarine processes as well as the recent history of glaciation, and large numbers of tide water glaciers. A lack of understanding of the natural variation in this system make the elucidation of anthropogenic changes problematic and fraught with controversy.

Findings and Status:

This was the fifth year of a coninuing study to monitor oceanographic patterns in Glacier Bay. Efforts include six oceanographic surveys done annually which sample 21 stations spread throughout the lower west and east arms of Glacier Bay. A profile with salinity, temperature, primary productivity (chlorophyl a concentration), light penetration and turbidity is taken at one meter intervals at each site. Data is processed and made available to the park and all researchers through internet access immediately after surveys. A major effort will be undertaken in 1999 and 2000 with the hiring of an oceanogrpahic postdoc to analyze the data from all years. Currently limited analysis has been conducted which has been used in several publications and talks addressing the effects of oceanographic patterns on species distributions. Current findings include: elucidation of patterns of water stratification which indicate that upwelling occurs continuously in several parts of the bay and on a twice daily basis in many other areas, the distributions of halibut are controlled by either salinity or the closely linked sedimentation patterns, and the primary productivity system at Glacier Bay is probably light limited rather than nutrient limited.

For this study, were one or more specimens collected and removed from the park but not destroyed during analyses?
No

Funding provided this reporting year by NPS: 0	**Funding provided this reporting year by other sources:** 15000

Fill out the following ONLY IF the National Park Service supported this project in this reporting year by providing money to a university or college

Full name of college or university:	Annual funding provided by NPS to university or college this reporting year:
n/a	0